

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***STATEMENT OF BASIS / SUMMARY***

Conditional Major, Operating

Permit: F-20-019

The Hennegan Company

7455 Empire Drive

Florence, KY 41042

May 13, 2020

Jonathon Hughes, Reviewer

SOURCE ID: 21-015-00088

AGENCY INTEREST: 37191

ACTIVITY: APE20200001

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Permit: F-20-019

**SECTION 1 – SOURCE DESCRIPTION**

SIC Code and description: 2752, Commercial Lithographic Printing

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Boone

Nonattainment Area ☐ N/A ☐ PM<sub>10</sub> ☐ PM<sub>2.5</sub> ☐ CO ☐ NO<sub>x</sub> ☐ SO<sub>2</sub> ☒ Ozone ☐ Lead

If yes, list Classification: Marginal

PTE\* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM<sub>10</sub> ☐ PM<sub>2.5</sub> ☐ CO ☐ NO<sub>x</sub> ☐ SO<sub>2</sub> ☒ VOCPTE\* greater than 250 tpy for any criteria air pollutant ☐ Yes ☒ No

If yes, for what pollutant(s)?

☐ PM<sub>10</sub> ☐ PM<sub>2.5</sub> ☐ CO ☐ NO<sub>x</sub> ☐ SO<sub>2</sub> ☐ VOCPTE\* greater than 10 tpy for any single hazardous air pollutant (HAP) ☐ Yes ☒ No

If yes, list which pollutant(s):

PTE\* greater than 25 tpy for combined HAP ☐ Yes ☒ No

\*PTE does not include self-imposed emission limitations.

Description of Facility:

Commercial lithographic printing facility using web and sheet fed presses.

## SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-20-019

Activities: APE20200001

Received: April 15, 2020

Application Complete Date: May 5, 2020

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☐ Yes ☒ No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐ Yes ☒ No

### Description of Action:

Renewal permit, no requested construction. Facility indicates there are five natural gas heaters that are not in the permit that should be in the permit. These are added as of this review.

Also, the follow equipment has been removed from the facility: EP03, Digital Presses, HP Indigo 7000, TEC Lightning Digital Coater, One Paper Baler, Two small perfect binders, Plate processor and Plate oven.

Additionally the facility requested some changes to monitoring and recordkeeping requirements pursuant to 401 KAR 50:012. These changes have been accepted and incorporated as of this permitting action. The frequency of monitoring/recordkeeping for storing cleaning solutions and used towels in closed containers should be “weekly” instead of “daily” as indicated in F-15-011 R2.

F-20-019 Emission Summary				
Pollutant	2018 Actual (tpy)	Previous PTE F-15-011 R2 (tpy)	Change (tpy)	Renewal PTE F-20-019 (tpy)
CO	1.28	7.44	0.52	7.96
NO <sub>x</sub>	1.52	8.86	0.62	9.48
PT	0.115	0.67	0.05	0.72
PM <sub>10</sub>	0.115	0.67	0.05	0.72
PM <sub>2.5</sub>	0.115	0.67	0.05	0.72
SO <sub>2</sub>	0.009	0.05	0.01	0.06
VOC	17.8	137	-19	118
Lead	0	0	0	0
Greenhouse Gases (GHGs)				
Carbon Dioxide	1823	10628	746	11374
Methane	0.035	0.200	0.02	0.220
Nitrous Oxide	0.034	0.195	0.014	0.209
CO <sub>2</sub> Equivalent (CO <sub>2</sub> e)	1834	10693	752	11445
Hazardous Air Pollutants (HAPs)				
2-Butoxyethyl Acetate	0.948	3.20	0	3.20
Combined HAPs:	0.955	3.34	0	3.34

### SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #01 Web Presses Utilizing Heat Set Inks				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
VOC	Source wide 80 tpy	401 KAR 52:030	Material Balance & MSDS	Recordkeeping, rolling 12-month total
VOC	40 tpy for Web Presses	To preclude 401 KAR 51:052	Material Balance & MSDS	Recordkeeping, rolling 12-month total
VOC	90% removal that enters dryer exhausts	401 KAR 50:012	N/A	Testing of RTO at least every 5 years and continuous monitoring
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS	Assumed based on proper operation of press and indicated inks used
Opacity	20%	401 KAR 59:010, Section 3(1)	N/A	Assumed based on proper operation of press and indicated inks used

**Initial Construction and Modification Dates:** *See Below*

#### Process Description:

**01W** is an 8-color Baker Perkins Web Printing Press using a fountain solution to distinguish between print area and non-print area with an oven and a chiller.

01W has a UV curing or aqueous coating applicator.

01W has a maximum design feed rate of 1,450 ft/min (per manufacturer) but will typically be operated at 1,000 ft/min.

01W utilizes cylinders with a printable surface 37.5 inches wide and the capacity to print on both sides of a web simultaneously.

01W can utilize heat set ink at a maximum design rate of 21.75 gallons/hr, due to dryer limitations.

The oven on 01W uses 2-2.93 MM Btu/hr maximum heat input burner to dry ink on the web.

01W is equipped with automated blanket washing system utilizing a packaged solvent and cloth system to clean ink from blanket cylinders.

**Construction commenced:** 1986

**Modified to accommodate aqueous coating:** January 2001.

**Modified to add two coating rollers:** December 2014.

**02W** is a 6-color Baker Perkins G14 Web Printing Presses using a fountain solution to distinguish between print area and non-print area with an oven and a chiller.

02W has a maximum design feed rate of 1,850 ft/min (per manufacturer) but will typically be operated at 1,000 ft/min.

02W utilizes cylinders with a printable surface 37.5 inches wide and the capacity to print on both sides of a web simultaneously.

02W can utilize heat set ink at a maximum design rate of 27.75 gallons/hr due to dryer limitations.

The oven on 02W uses 2-2.93 MM Btu/hr maximum heat input burner to dry ink on the web.

02W is equipped with automated blanket washing system utilizing a packaged solvent and cloth system to

### **Emission Unit #01 Web Presses Utilizing Heat Set Inks**

clean ink from blanket cylinders.

**Construction commenced:** 1991

**03W** is an **8-color Heidelberg Web Printing Press** using a fountain solution to distinguish between print area and non-print area with an oven and a chiller.

03W has a maximum design feed rate of 2,000 ft/min (per manufacturer) but it will typically be operated at 1,400 ft/min.

03W utilizes cylinders 38 inches wide and has the capacity to print on both sides of a web simultaneously.

03W can utilize heat set ink at a maximum design rate of 263 lbs/hr due to dryer limitations.

03W utilizes cylinders 38 inches wide and has the capacity to print on both sides of a web simultaneously.

03W can utilize heat set ink at a maximum design rate of 263 lbs/hr due to dryer limitations.

The oven on 03W uses a 4.0 MM Btu/hr maximum heat input burner to dry ink on the web.

03W is equipped with automated blanket washing system utilizing a packaged solvent and cloth system to clean ink from blanket cylinders.

**Construction commenced:** 2001

**Control Equipment:** VOC emissions from 01W - 03W are controlled by a regenerative thermal oxidizer with a 4.5 MMBtu/hr natural gas burner. On July 21, 2016, the VOC destruction and removal efficiency of the thermal oxidizer was determined on average to be 92.8%. The permit limit is 90%.

**Control Equipment in operation:** February, 2002

#### **Applicable Regulations:**

**401 KAR 50:012**, General application, will apply since the source is potentially major for VOC and no regulations specifically apply to offset lithographic printing. Regulation 401 KAR 50:012, General application, requires control procedures that are reasonable and available to be applied. The Division has determined what these procedures should be based on the presumptive norm established by EPA. To establish the RACT requirements for this facility, a public hearing was held on November 10, 1998 at 7:00 PM in the Fiscal Courtroom at 2950 Washington Street, Burlington, Kentucky, 41005.

Requirements resulting from application of 401 KAR 50:012 are:

No alcohol shall be used in fountain solutions.

Fountain solutions applied shall contain less than 5% VOC by weight.

Cleaning solutions shall have a vapor pressure < 10 mm Hg.

Cleaning solutions, including used solvent laden towels, shall be stored in closed containers.

Control efficiency on VOCs in the dryer exhausts shall be at least 90%.

Applying all of the above mentioned controls would allow the source to comply with the VOC emissions synthetic minor limit of 80 TPY.

Per 401 KAR 50:012 Section (5), except as provided by 401 KAR 50:055, nothing in these administrative regulations shall allow a source remove control equipment or discontinue procedures previously required in a nonattainment area to achieve the national air quality standards until a state implementation plan containing different requirements has been approved by the U.S. EPA. See the permit for additional details of 401 KAR 50:012 requirements.

### **Emission Unit #01 Web Presses Utilizing Heat Set Inks**

**401 KAR 59:010**, New process operations

**Non-applicable Regulation:**

**401 KAR 51:017**, Prevention of significant deterioration of air quality, applies to major sources or major modifications commenced after September 22, 1982 located in an attainment area. Press 03W was constructed when the area was attainment. The regulation 401 KAR 51:017 was evaluated for applicability at the time and was found not to apply. Potential VOC emissions prior to construction of press 03W were below major source status and construction of press 03W was not a major modification.

**401 KAR 59:210**, New fabric, vinyl and paper surface coating operations, does not apply to the lithographic printing presses at this source. This rule applies to “printing” as the term is defined in this rule. Further, the term “printing”, as defined, applies only to flexographic and rotogravure processes, which are not lithographic offset printing processes.

**401 KAR 59:212**, New graphic arts facilities using rotogravure and flexography, does not apply to the lithographic printing presses at this source. The term “printing”, as defined in this rule, applies only to flexographic and rotogravure processes, which are not lithographic offset printing processes.

**401 KAR 60:005**, Sections 2(2)(ww) and 3(1)(uu) 40 C.F.R. 60.430 to 60.435 (Subpart QQ), Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing. The requirements of 40 CFR 60.430, Subpart QQ, do not apply to the printing presses at the source because none of the presses are publication rotogravure printing presses.

**40 CFR 64**, Compliance Assurance Monitoring (CAM), does not apply to any emission unit because this source is being approved to operate under a Conditional Major permit and, pursuant to 40 CFR 64.2(a), the requirements of this rule are applicable only to a source required to obtain a Title V (Part 70 or 71) permit.

**Precluded Regulations:**

**401 KAR 51:052**, Review of new sources in or impacting upon nonattainment areas, applies to new major sources or major modifications commenced after September 22, 1982 located in a nonattainment area. This regulation has been determined by the Division to be precluded due to limitations imposed on the source.

**401 KAR 63:002**, Section 2(4)(aa) 40 C.F.R. 63.820 to 63.831, Table 1, and Appendix A (Subpart KK), National Emission Standards for the Printing and Publishing Industry. Printing operations at this source are not subject to the requirements of 40 CFR Part 63, Subpart KK, because this subpart applies to a major source of HAP emissions as defined at 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated. The Hennegan is neither a major source of HAP nor operates flexographic and rotogravure printing presses.

**Comments:**

The web presses (EU01) at Hennegan use heatset inks. Heatset inks are applied, set by heat, and subsequently cooled by chiller rolls. Additionally, all of the web presses are controlled by one (1) RTO and the web presses have automated cleaning equipment.

The sheet fed (EU02) presses at Hennegan use non-heatset inks. Absorption, oxidation, and UV radiation

### **Emission Unit #01 Web Presses Utilizing Heat Set Inks**

are used to set these inks. Heat and chiller rolls are not used on these presses. Additionally, these presses do not have automated cleaning equipment.

A regenerative thermal oxidizer (RTO) is used to control emissions from the web presses. The RTO has been installed to control VOC emissions from the web press ovens. In July 2016, control efficiency of the RTO was determined by stack testing to be on average 92.9% for all VOC emissions entering the control device. The permit limit is 90%.

Guidance found in the Draft CTG document Control of Volatile Organic Compound Emissions from Offset Lithographic Printing and the ACT document Offset Lithographic Printing was used to estimate the capture efficiency that would be realized for all VOC emissions from the web presses. Based on the guidance, 100% of the VOC emissions from the heatset inks will be captured to the control device if the ovens maintain negative pressure. 40% capture will be realized on the automatic cleaning solution emissions. And, 70% capture will be realized on the web fountain solution emissions. Alternative capture efficiency estimates may be used if the source wishes to determine the capture efficiency through testing.

Fountain solutions will not contain alcohol. By using alcohol substitutes in the fountain, VOC emissions are reduced. Some of the fountain emissions will be controlled (control efficiency is described above).

Manual cleaning materials will have a vapor pressure below 10 mm Hg and will be stored in closed containers. Through these measures, the Division estimates that 50% of the VOCs used can be prevented from becoming emissions. This emission prevention is based on the above EPA guidance.

Automatic cleaning material emissions are not assumed to be preventable. However, some of the automatic cleaning emissions will be controlled (control efficiency is described above).

The ovens use natural gas to directly heat the webs. The emission factors for the natural gas combustion are based on AP-42 emission factors for small boilers.

Particulate emissions from the web presses have been assumed to be minimal as long as the presses are operated properly, appropriate inks are used, and natural gas is burned in the ovens. This is based on the Method 5 test performed April 6 and 7, 1976 at a web press used by Danner Press located in Canton, Ohio.

Particulate emissions from the sheet fed presses have been assumed to be minimal since the press is not vented to the atmosphere (other than the general building ventilation).

VOC emission factors for the press will vary. The emission factors are based on EPA guidance (most of them are found in the Draft CTG document Control of Volatile Organic Compound Emissions from Offset Lithographic Printing). Alternative emission factors may be used by the source if testing is performed and approved by the Division prior to their utilization.

VOCs contained in the heat set web inks and varnishes used will have an 80% emission factor (some VOCs are believed to be retained in the web).

VOCs contained in the sheet fed inks and varnishes used will have a 5% emission factor (most of the VOCs are believed to oxidize, otherwise react chemically to become nonvolatile, or remain in the paper).

VOCs contained in other coatings used will have a 100% emission factor.

**Emission Unit #01 Web Presses Utilizing Heat Set Inks**

VOCs contained in fountain solutions used will have a 100% emission factor and no VOCs will remain in the waste fountain solutions.

VOCs contained in automatic cleaning materials used will have a 100% emission factor.

VOCs contained in manual cleaning materials used will have a 50% emission factor because approximately 50% of the cleaning material will remain in the cleaning rags. As long as the rags are enclosed, the VOCs are not emitted.

No monitoring is required for compliance with mass and opacity standards applicable to the presses since presses like these that are operated and maintained consistent with manufacturer recommendations will always comply with the limits.

The pressure of the operating dryer will be monitored. As long as the dryer is operated at negative pressure relative to the surrounding pressroom, the capture efficiency for VOC from the inks and varnishes (coatings) is assumed to be 100 percent.

RTO temperature will be monitored continuously to demonstrate the control efficiency actually achieved on the VOC emissions.

To demonstrate the VOC content of fountain solutions to be used on the presses the permittee will have to keep track of total fountain material quantities used through record keeping.

Storage of wash solvents shall be monitored weekly to verify that used and unused portions are in closed containers. This degree of monitoring should be a sufficient reminder to personnel of the operating limitation. It would be impractical to require continuous monitoring of wash solvent storage.

Source-wide VOC limit was previously reduced from 90 tpy to 80 tpy when the source requested to not conduct monthly emissions recordkeeping of insignificant activities. It was determined that insignificant activities had a total PTE of 10 tpy, so by reduction of the 90 tpy limit by 10 tpy the facility no longer is required to monitor/record VOC emissions for insignificant activities.



<b>Emission Unit #02 Sheet Fed Lithographic Presses</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
VOC	Source wide 80 tpy	401 KAR 52:030	Material Balance & MSDS	Recordkeeping, rolling 12-month total
VOC	40 tpy for Sheet Fed Presses	To preclude 401 KAR 51:052	Material Balance & MSDS	Recordkeeping, rolling 12-month total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS	Assumed based on proper operation of press and indicated inks used
Opacity	20%	401 KAR 59:010, Section 3(1)	N/A	Assumed based on proper operation of press and indicated inks used
<p><b>Initial Construction and Modification Dates:</b> <i>See Below</i></p> <p><b>Process Description:</b>  <b>06SF</b> is an <b>8-color Heidelberg Sheet Fed Printing Press</b> using a fountain solution to distinguish between print area and non-print area and each is equipped with a UV lamp to set UV ink.  06SF can utilize either oxidation/polymerization sheet fed ink or UV setting ink.  06SF has an ambient air dryer, and a starch applicator. Additionally, 06SF is equipped with an aqueous coating station.  06SF is 10,000 impressions per hour.  06SF has a capable of printing at a rate of 15,000 impressions per hour but will typically be operated at maximum printing area of 27.25" x 40".  06SF press prints on only one side, is cleaned manually and with automated blanket washers utilizing a system of solvent spray nozzles to clean ink from the blanket cylinders, and has no physical control equipment for VOC emissions.</p> <p><b>Construction commenced:</b> May 1996.  06SF replaced by like press while under warranty: December 1999.</p> <p><b>07SF</b> is an <b>8-color Heidelberg Sheet Fed Printing Press</b> using a fountain solution to distinguish between print area and non-print area and each is equipped with a UV lamp to set UV ink.  07SF can utilize either oxidation/polymerization sheet fed ink or UV setting ink.  07SF has an ambient air dryer, and a starch applicator. Additionally, 07SF is equipped with an aqueous coating station.  07SF is capable of printing at a rate of 15,000 impressions per hour but will typically be operated at 10,000 impressions per hour.  07SF has a maximum printing area of 27.25" x 40".  07SF press prints on only one side, is cleaned manually and with automated blanket washers utilizing a system of solvent spray nozzles to clean ink from the blanket cylinders, and has no physical control equipment for VOC emissions.</p> <p><b>Construction commenced:</b> December 1998.</p>				

### **Emission Unit #02 Sheet Fed Lithographic Presses**

**08SF** is a **12-color Heidelberg Sheet Fed Printing Press** using a fountain solution to distinguish between print area and non-print area and each is equipped with a UV lamp to set UV ink.

08SF utilizes only oxidation/polymerization sheet fed ink.

08SF has an ambient air dryer, and a starch applicator. Additionally, 08SF is equipped aqueous coating on stations 6 and 12.

08SF is capable of printing at a rate of 12,000 impressions per hour but will typically be operated at 8,000 impressions per hour with a minimum of 3,000 impressions per hour.

08SF has a maximum printing area of 27.95" x 40.16".

08SF can print on only one side for the first 6 color stations, and on only one side (same or opposite side) for the second 6 color stations, is cleaned manually and with automated blanket washers utilizing a system of solvent spray nozzles to clean ink from the blanket cylinders 08SF has no physical control equipment for VOC emissions.

**Construction commenced:** September 2005.

**09SF** is a **12-color KBA Sheet Fed Printing Press** using a fountain solution to distinguish between print area and non-print area and each is equipped with a UV lamp to set UV ink.

09SF can utilize either oxidation/polymerization sheet fed ink or UV setting ink.

09SF has an ambient air dryer, and a starch applicator. Additionally, 09SF is equipped with 2 UV coating stations.

09SF is capable of printing at a rate of 11,000 impressions per hour

09SF has a maximum printing area of 27.25" x 40".

09SF prints on only one side for the first 6 print stations and on only one side (same or opposite side) for the second 6 print stations. It is cleaned manually and with automated blanket washers utilizing a system of solvent spray nozzles to clean ink from the blanket cylinders,

09SF has no physical control equipment for VOC emissions.

**Construction commenced:** January 2019.

#### **Applicable Regulations:**

**401 KAR 50:012**, General application, will apply since the source is potentially major for VOC and no regulations specifically apply to offset lithographic printing. Regulation 401 KAR 50:012, General application, requires control procedures that are reasonable and available to be applied. The Division has determined what these procedures should be based on the presumptive norm established by EPA. To establish the RACT requirements for this facility, a public hearing was held on November 10, 1998 at 7:00 PM in the Fiscal Courtroom at 2950 Washington Street, Burlington, Kentucky, 41005.

Requirements resulting from application of 401 KAR 50:012 are:

No alcohol shall be used in fountain solutions.

Fountain solutions applied shall contain less than 5% VOC by weight.

Cleaning solutions shall have a vapor pressure < 10 mm Hg.

Cleaning solutions, including used solvent laden towels, shall be stored in closed containers.

Applying all of the above mentioned controls would allow the source to comply with the VOC emissions synthetic minor limit of 80 TPY.

### **Emission Unit #02 Sheet Fed Lithographic Presses**

Per 401 KAR 50:012 Section (5), except as provided by 401 KAR 50:055, nothing in these administrative regulations shall allow a source remove control equipment or discontinue procedures previously required in a nonattainment area to achieve the national air quality standards until a state implementation plan containing different requirements has been approved by the U.S. EPA. See the permit for additional details of 401 KAR 50:012 requirements.

**401 KAR 59:010**, New process operations

#### **Non-applicable Regulations:**

**401 KAR 59:210**, New fabric, vinyl and paper surface coating operations, does not apply to the lithographic printing presses at this source. This rule applies to “printing” as the term is defined in this rule. Further, the term “printing”, as defined, applies only to flexographic and rotogravure processes, which are not lithographic offset printing processes.

**401 KAR 59:212**, New graphic arts facilities using rotogravure and flexography, does not apply to the lithographic printing presses at this source. The term “printing”, as defined in this rule, applies only to flexographic and rotogravure processes, which are not lithographic offset printing processes.

**401 KAR 60:005**, Sections 2(2)(ww) and 3(1)(uu) 40 C.F.R. 60.430 to 60.435 (Subpart QQ), Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing. The requirements of 40 CFR 60.430, Subpart QQ, do not apply to the printing presses at the source because none of the presses are publication rotogravure printing presses.

**40 CFR 64**, Compliance Assurance Monitoring (CAM), does not apply to any emission unit because this source is being approved to operate under a Conditional Major permit and, pursuant to 40 CFR 64.2(a), the requirements of this rule are applicable only to a source required to obtain a Title V (Part 70 or 71) permit.

#### **Precluded Regulations:**

**401 KAR 51:052**, Review of new sources in or impacting upon nonattainment areas, applies to new major sources or major modifications commenced after September 22, 1982 located in a nonattainment area. This regulation has been determined by the Division to be precluded due to limitations imposed on the source.

**401 KAR 63:002**, Section 2(4)(aa) 40 C.F.R. 63.820 to 63.831, Table 1, and Appendix A (Subpart KK), National Emission Standards for the Printing and Publishing Industry. Printing operations at this source are not subject to the requirements of 40 CFR Part 63, Subpart KK, because this subpart applies to a major source of HAP emissions as defined at 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated. The Hennegan is neither a major source of HAP nor operates flexographic and rotogravure printing presses.

#### **Comments:**

See comments for Emission Unit #01

### SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

#### Testing Requirements/Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
01	RTO #1	VOC DRE	401 KAR 50:012	Initial and every 5 years	Method 25A	90%	98.2%	N/A	CMN20060001	6/29/2006
01	RTO #1	VOC DRE	401 KAR 50:012	Initial and every 5 years	Method 25A	90%	99.6%	N/A	CMN20110001	6/2/2011
01	RTO #1	VOC DRE	401 KAR 50:012	Initial and every 5 years	Method 25A	90%	92.9%	1498 F	CMN20160001	7/21/2016

**Footnotes:**

## SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

**Table A - Group Requirements:**

<b>Emission and Operating Limit</b>	<b>Regulation</b>	<b>Emission Unit</b>
80 tpy of VOC emissions	401 KAR 52:030, <i>Federally-enforceable permits for nonmajor sources</i>	Source-wide
40 tpy VOC for Web Presses	To preclude 401 KAR 51:052, New source review	01
40 tpy VOC for Sheet Fed Presses	To preclude 401 KAR 51:052, New source review	02

**Table B - Summary of Applicable Regulations:**

<b>Applicable Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 50:012</b> , General application	01,02
<b>401 KAR 59:010</b> , New process operations	01,02
<b>401 KAR 63:020</b> , Potentially hazardous matter or toxic substances	01,02

**Table C - Summary of Precluded Regulations:**

<b>Precluded Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 51:052</b> , Review of new sources in or impacting upon nonattainment areas, applies to new major sources or major modifications commenced after September 22, 1982 located in a nonattainment area.	Source-wide
<b>401 KAR 63:002</b> , Section 2(4)(aa) 40 C.F.R. 63.820 to 63.831, Table 1, and Appendix A (Subpart KK), National Emission Standards for the Printing and Publishing Industry.	01,02

**Table D - Summary of Non Applicable Regulations:**

<b>Non Applicable Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 59:210</b> , New fabric, vinyl and paper surface coating operations, does not apply to the lithographic printing presses at this source.	
<b>401 KAR 59:212</b> , New graphic arts facilities using rotogravure and flexography, does not apply to the lithographic printing presses at this source.	
<b>401 KAR 60:005</b> , Sections 2(2)(ww) and 3(1)(uu) 40 C.F.R. 60.430 to 60.435 (Subpart QQ), Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing.	
<b>40 CFR 64</b> , Compliance Assurance Monitoring (CAM),	

## **SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)**

### **Air Toxic Analysis**

#### **401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances***

The Division for Air Quality (Division) has performed SCREEN View on May 13, 2020 of potentially hazardous matter or toxic substances (2-Butoxyethyl Acetate and Ethylene Glycol) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

### **Single Source Determination**

N/A

## SECTION 5 – PERMITTING HISTORY

Permit	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
V-98-036	Initial	N/A	N/A	N/A	Initial Title V Permit	NSR/Syn Minor
F-05-022	Initial	APE20050004	6/14/2005	9/27/2005	Initial Cond Major/Syn Minor Permit	Syn Minor
F-05-022 R1	Admin Amend	APE20070001	12/8/2005	3/19/2007	Ownership Change	N/A
F-10-029	Renewal	APE20100001	6/18/2010	10/4/2010	Renewal Permit	N/A
F-10-029 R1	Minor Revision	APE20130001	5/21/2013	6/7/2013	RTO Monitoring Requirement Clarification	N/A
F-10-029 R2	Minor Revision	APE20140001	11/21/2014	12/29/2014	Ownership Change & Addition of 2 color rollers to Web Press #1	N/A
F-15-011	Renewal	APE20150001	4/20/2015	10/16/2015	Renewal Permit	N/A
F-15-011 R1	Minor Revision	APE20160002	12/14/2016	1/18/2017	Revision to add 2 printing presses	N/A
F-15-011 R2	Minor Revision	APE20180003	1/17/2019	3/2/2019	Revision to add 1 printing press	N/A

## **SECTION 6 – PERMIT APPLICATION HISTORY**

N/A



## **APPENDIX A – ABBREVIATIONS AND ACRONYMS**

AAQS	– Ambient Air Quality Standards
BACT	– Best Available Control Technology
Btu	– British thermal unit
CAM	– Compliance Assurance Monitoring
CO	– Carbon Monoxide
Division	– Kentucky Division for Air Quality
ESP	– Electrostatic Precipitator
GHG	– Greenhouse Gas
HAP	– Hazardous Air Pollutant
HF	– Hydrogen Fluoride (Gaseous)
MSDS	– Material Safety Data Sheets
mmHg	– Millimeter of mercury column height
NAAQS	– National Ambient Air Quality Standards
NESHAP	– National Emissions Standards for Hazardous Air Pollutants
NO <sub>x</sub>	– Nitrogen Oxides
NSR	– New Source Review
PM	– Particulate Matter
PM <sub>10</sub>	– Particulate Matter equal to or smaller than 10 micrometers
PM <sub>2.5</sub>	– Particulate Matter equal to or smaller than 2.5 micrometers
PSD	– Prevention of Significant Deterioration
PTE	– Potential to Emit
SO <sub>2</sub>	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
VOC	– Volatile Organic Compounds